



WEST COAST GREEN HIGHWAY

Washington State Department of Transportation, Public/Private Partnerships Office

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The West Coast Green Highway is the 1,350 miles of Interstate 5 connecting three states and three countries.

Making I-5 Cleaner, Greener, and Smarter

The states of Washington, Oregon and California and the province of British Columbia are working together to advance the West Coast Green Highway, an initiative to promote the use of cleaner fuels. By increasing the market demand for high-efficiency, zero- and low-carbon-emitting vehicles, this initiative aims to reduce the transportation sector's impact upon the environment and dependency on foreign oil.

The West Coast Green Highway is the 1,350 miles of Interstate 5 (I-5) stretching from the U.S. border with Canada, through Washington, Oregon, and California, to the U.S. border with Mexico. Designated a "Corridor of the Future" by the U.S. Department of Transportation, I-5 could soon become the nation's cleanest, greenest, and smartest highway. The drivers of hundreds of thousands of cars and trucks that travel on this major roadway each day soon may select from a menu of clean transportation choices.

Encouraged by President Obama's remarks lauding the West Coast Green Highway and recent legislation, the states are collaborating on partnerships with the private sector to accelerate the Initiative.

This brochure highlights efforts made by the Washington State Department of Transportation (WSDOT) Public/Private Partnerships Office.

Reducing Carbon Emissions, Creating Green Jobs, and Advancing Energy Independence

The West Coast Green Highway Initiative strengthens the economy with environmentally sustainable transportation options. By encouraging a shift from petroleum-based fuels to alternative fuels with low or no carbon emissions, the initiative helps Washington meet state and national greenhouse gas reduction goals and creates green-technology jobs.

In Washington, the transportation sector accounts for nearly half of the state's greenhouse-gas emissions. The West Coast Green Highway Initiative contributes to a full suite of strategies needed to reduce transportation emissions:

- Reducing vehicle miles traveled
- Improving vehicle technology
- Lowering the carbon content of fuels
- Improving the efficiency of the transportation system

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Leading the Way

From installing electric vehicle charging infrastructure to building smarter highways through traffic management systems, WSDOT is contributing to the success of the West Coast Green Highway in four important ways.

1. **Partnerships:** building a coalition of public agencies and private businesses that will support and in some cases fund West Coast Green Highway projects.
2. **Business Assistance:** exploring incentives, funding assistance and marketing for businesses that invest in alternative fuels and infrastructure.
3. **Fueling and Charging Sites:** identifying locations and funding for alternative fuel infrastructure to ensure travel connections between cities, regions, states, and countries.
4. **Branding:** creating recognizable way-finder signs and a distinctive west coast travel experience for drivers and businesses that use the corridor.

Public-Private Partnerships Projects Underway:

Pursuing an Alternative-Fuels Pilot Project

WSDOT is launching an Alternative Fuels Corridor Pilot Project to ensure adequate and reliable availability of next-generation fuels for travelers throughout the I-5 corridor. With Oregon and California on board, motorists soon may charge their electric vehicles or fill up with alternative fuels, such as natural gas, biodiesel, ethanol, or hydrogen, along the entire West Coast Green Highway.



Hydrogen-powered fuel cell cars make a pit stop in Olympia while traveling the length of the West Coast Green Highway from San Diego, California to Vancouver B.C. during the 2009 H2 Road Tour.

for providing alternative fuels along the I-5 corridor in Washington. Now the department is looking to form partnerships with retailers along the corridor, the alternative fuel industry and green vehicle manufactures to open up to five alternative-fueling locations on state property along I-5.

A WSDOT study recently uncovered an economically feasible approach

Getting Washington Ready for Plug-In Electric Vehicles

Electric vehicle (EV) technology is the most efficient zero-emission fuel currently available. Vehicles that run on electricity drawn from the state's clean-energy mix of hydro, wind and solar energy are far cleaner than any petroleum-dependent car. Major auto manufacturers such as Ford, Nissan, and Chevrolet plan to introduce mass-produced EVs as early as this year.



Today, only about 990 EVs are registered in Washington, but that number is about to skyrocket. In 10 years, experts predict, 300,000 EVs could be whispering over Washington roadways, and more than 2 million could be within a single charge of the West Coast Green Highway and partnering states.

Last year, President Obama established a goal of bringing 1 million grid-enabled vehicles onto this country's roads by 2015. Congress and the President directed federal funds

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Ford and other major automakers are starting to mass-produce plug in electric vehicles.

in pursuit of that goal. Washington is one of five states in the nation selected for a Nissan/eTec demonstration electric vehicle project.

Washington, Oregon, California,

Arizona and Tennessee are sharing a \$98.8 million Department of Energy grant for "The EV Project," a program that advances electric transportation. Nissan plans to deliver nearly 1,000 zero-emission LEAF electric cars to a waiting list of Puget Sound buyers starting this December. A charging equipment manufacturer, eTec, will install about 2,500 EV charging stations in Washington homes and public places.

WSDOT is working with utilities, the EV industry, commuters and other agencies to plan where to install the public



Washington is one of five states involved in The EV Project, the nation's largest ever deployment of electric vehicles and charge infrastructure.

charging stations. When the electric vehicles start rolling in later this year, Washington will need accessible charging stations to make the new EVs useful, efficient and convenient to drive.

A continuous chain

of charging stations along I-5 will enable people to drive electric vehicles to almost anywhere in the Pacific Coast states. Public charging sites will be placed along the West Coast Green Highway at shopping malls, safety rest areas, and park and ride lots to allow EV users to travel between major cities such as Seattle and Portland.

WSDOT is coordinating with Oregon and California to establish electric vehicle infrastructure standards, guidelines, and consistent signage.

Creating NewMobility Hubs

NewMobility Hubs bring together some of the most promising transportation programs, such as RideshareOnline, and vehicle technologies, such as electric vehicle charging and mobile in-vehicle communication systems, to form an integrated approach to mobility. WSDOT is teaming up with Microsoft, Inrix, Ford, Cascadia, University of Washington and others on a NewMobility technology project.

NewMobility Hubs transform existing park and ride lots and transit centers into high-tech, multi-modal hubs where travelers can charge their electric cars, board a bus or train, meet rideshare partners, check out a shared bike or car, and make travel decisions based on real-time traffic and transit information.



Kiosks at NewMobility Hubs would link travelers with real-time traffic conditions, transit, smart cars, charging stations, and the electricity grid.

Fully developed, NewMobility Hubs also incorporate transit-oriented development features such as telework centers, workforce housing, and mixed use retail to help support sustainable communities.

Kiosks and related IT infrastructure are the backbone of the NewMobility Hub concept and lend themselves to rapid deployment. Kiosks will be both "hot" with smart-grid electric vehicle charging stations and "smart" with touch screen access to advanced IT services. Placed at the center of four parking spaces and augmented by solar panels, commuters can charge their electric vehicles or access real-time traveler information.

WSDOT is seeking grant funding to help create a network of NewMobility Hubs from the University of Washington to the Tacoma Dome station.

NewMobility Hubs support the West Coast Green Highway Initiative by encouraging the use of electric vehicles, offering greener commute options, and improving mobility.

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Transitioning to Renewable Energy

The nation's first "solar highway" is located on the West Coast Green Highway at the intersection of I-5 and I-205 in Oregon. The facility includes 594 solar panels to help light up the interchange with clean, renewable and secure energy.



The West Coast Green Highway is home to the nation's first "solar highway," lighting up Oregon's I-5 and I-205 interchange.

Using lessons learned in Oregon, WSDOT is exploring solar and wind-power technology to help meet agency sustainability goals and reduce energy costs. The Department is investigating potential partnerships with utilities and seeking grant funding to demonstrate emerging technologies on state-owned property.

With more than 18,000 state highway lane miles of right of way, WSDOT could use the sun or wind to generate electricity for traffic lights, cameras, facilities, and safety rest areas. Solar panels may even be installed to help power electric vehicle charging stations.



Photo: Tom Saxton

An all-electric Tesla Roadster recharges at PSE's Wild Horse Renewable Energy Center while workers install another array of solar panels.

WSDOT is already using solar power to illuminate remote facilities and to energize electronic displays on portable changeable message signs. Designs for new and renovated safety rest areas include power from renewable energy where appropriate.

Additionally, the department is administering a federal grant program that supports renewable energy projects for Washington transit systems. Through Transit Investments for Greenhouse Gas and Energy Reduction grants, three transit agencies received funding to purchase zero-emissions buses, install electric charging stations and light bus facilities with solar panels.

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